Kent and Medway NHS
NHS and Social Care Partnership Trust

Neuropsychiatry Department
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7th March 2013

The Planning Officer
Tonbridge & Malling Borough Council
Tonbridge
Kent

Dear Sir

Re: Planning Application Raphael Medical centre Coldharbour Lane Hildenborough Tonbridge

Supplementary to my correspondence of 27th July 2012 I wish to make you aware, with the intention of supporting your decision making, that consensus is being established amongst all stakeholders in the management of patients with acquired brain injury, that for the population of Kent & Medway, of approximately 1.7 million, there is a requirement for at least 70 inpatient beds. These are likely to be commissioned in the imminent future by either the National Commissioning Board for England and Wales, or local Clinical Commissioning Groups who assume responsibility from Primary Care Trusts in April 2013.

Kent currently does not support this required number of neurorehabilitation beds. This takes into account the facilities currently available in both the NHS and Independent sector. There is definitely underprovision of Level 1a, 2a, and 2b facilities. The Raphael Medical Centre is currently the only provider of level 1a Neuropsychiatry beds, and this is limited to 8 beds only. Most Kent patients are having to leave the county for treatment at excessive cost to the local economy. This is not a situation that is either economically or clinically acceptable.

The provision of bed capacity needs to increase in Kent. Of the 36 beds requiring planning permission at the Raphael Medical Centre, a minimum of 12 will need to be allocated for patients with brain injury requiring Neuropsychiatric interventions, bringing the total complement to 20, this being ***the minimum*** requirement for recognition as a provider unit for commissioning and accreditation purposes, implying having multidisciplinary staffing and skills (medical, nursing, and therapy) to fulfil quality outcome requirements. Of the remaining 24 beds requested a majority of these will serve essentially to reduce the waiting list. I hope that you will agree with me that it is unacceptable that patients in urgent need of rehabilitation care and treatment are so often left waiting for months in acute general hospitals. This situation should not continue for Kent patients.

I cannot emphasise enough to you the strategic importance to Kent at this time of developing this provision which relates to the current planning application. Can I therefore urge you to react positively to this application, notwithstanding the understandable, but perhaps not fully informed opinion, local to the centre, which is opposing such a development, and perhaps delaying your decision.

I hope that you will take these further views into account in reaching your considered decision.

Yours sincerely

Dr M Bodani
Consultant Neuropsychiatrist

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The Planning Officer
Tonbridge & Malling Borough Council
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27th July 2012

Dear Sir

Re: **Planning Application**
Raphael Medical Centre Coldharbour Lane Hildenborough Tonbridge Kent TN11 9LE

The Raphael Medical Centre at Hildenborough has been established for over 30 years with a well-recognised track record in managing complex patients with brain injury, including those requiring ventilatory support, and in low awareness state.

The Centre currently provides inpatient Neurorehabilitation to over 50 patients drawn from a wide range of referrers, but nearly all NHS (PCT) funded. The Centre is recognised as meeting criteria for Level 1 and Level 2 complex care, the only such service in West Kent & Medway.

In addition to its inpatient facilities and rehabilitation programmes, which have met CQC inspections, the Centre also provides step-down community rehabilitation in a number of self-contained units in the Centre's main grounds, for the use of those patients being progressed to independent living with minimal support.

What is less appreciated in Kent & Medway is the Centre's interest in providing rehabilitative care to patients with complex Neuropsychiatric conditions, often with psychiatric morbidity, such as Conversion Disorder and psychogenic seizures. The Centre is registered to manage patients detained under the Mental Health Act, 1983 (Amended 2007).

I am aware that in terms of resources a full multidisciplinary (physiotherapy, occupational therapy, speech and language therapy) programme is delivered 7 days a week, and the Consultant staff include specialists in Clinical Psychology, Rehabilitation Medicine, General Adult and Neuropsychiatry. There is a full time Resident Medical Officer. There are protocols for emergency access to Acute Medical care at District General Hospitals.

With respect to the Planning Application for a 44+ new build to provide further capacity to continue to manage Level 1 and Level 2 category patients the case is obvious based on the lack of such facilities in Kent & Medway, and the current NHS financial pressures to cut costs. The only service in Kent and Medway that provides inpatient Neurorehabilitation currently, based at West Kent

Neurorehabilitation Unit, Sevenoaks Hospital, is an isolated facility, with no out-of hours medical cover (except on-call GP), a 5 day therapy programme, and capacity restricted to 8 beds for a population of over 1 million people. In terms of planning for Payment By Results and enabling discharge from acute medical care to community rehabilitation, the Unit is largely ineffectual. Its long term future must be in doubt given KMPT's (its parent organisation) needs to balance its budget, which it is currently attempting by reducing the numbers of physical centres of activity it manages.

There is therefore a need to increase capacity in West Kent & Medway for Neurorehabilitation.

There is also a need for vision to recognise Kent's strategic need for Neuropsychiatric services across Kent delivered in a Centre of Excellence with capacity to complete the care pathway from GP referral to outpatient assessment, inpatient care, outreach support, and day care facilities.

After 6 years of effort all that the West Kent Neuropsychiatry Service (based at Darent House, Sevenoaks Hospital) has been resourced to provide (for inpatient care) are 2 cost per case beds with the majority of cases (in East Kent particularly) still requiring out of area care at the Maudsley Hospital.

There is still (as of 27.7.12) only one NHS doctor in Neuropsychiatry in Kent! This situation will not be remedied by current cost pressures in the NHS. The only outlook for current NHS services is a drive to increase productivity with the inevitable result of reduced quality of care and higher clinical risk taking.

Within the current NHS arrangements there is virtually no provision for Rehabilitation and Neuropsychiatric care of individuals in Kent with long term neurological conditions such as Huntington's, Parkinson's, Multiple Sclerosis, Motor Neurone Disease to name but a few. The referral criteria for accessing community brain injury support are woefully inconsistent designed to keep patients out (for example, only haemorrhagic strokes are seen but not infarcts!), with large numbers of patients receiving no support whatsoever.

It is unacceptable that under present arrangements patients requiring rehabilitation for Chronic Fatigue wait over a year for their first assessment; and there are no NHS facilities nationally for inpatient care. The last such centre at Queen's Hospital, Romford closed in August 2011. Services for patients with chronic pain are also lacking. Dementia care is poorly planned, resourced and delivered. There is very poor provision of community integrated resources, an area in which the Raphael has much experience already.

Without strategic vision Kent's need to provide training for all involved in such services and workforce planning is compromised.

The Raphael's proposal for this new build is an important opportunity for Kent to deliver a high standard of care to all of these individuals in an efficient, cost aware way, maintaining quality and good outcomes, and developing the services currently lacking in Kent, and likely to remain lacking for the long term. Kent needs such a Service at this time to be developed in state of the art facilities incorporating technologies for investigation and diagnosis (e.g. laboratory and neuroimaging) and I fully therefore support the planning application.

Yours Sincerely

Dr M. Bodani
Consultant Neuropsychiatrist

RAPHAEL MEDICAL CENTRE - THE CASE FOR REHAB

There are plans for the Raphael Medical Centre (RMC) in Hildenborough, near Tonbridge in Kent to establish a new neurorehabilitation unit on its already long established site. This brief paper sets out to look at the case for neurorehabilitation in general, and to establish the particular reasons why the RMC is well placed to be at the centre of this new Kent-based development.

Neurorehabilitation is in essence the means whereby people who have had brain injuries acquired either by trauma or through disease or neurological disorder are enabled to start the long journey back to optimised functional, intellectual and emotional independence. It enables people to make the transition from patient to active citizen where possible, or at the very least provides them with the option of being rather more than the passive objects of 24-hour care. Even where the injuries are so profound that there is scarcely no chance of conscious recovery, the principles of neurorehabilitation sensitively applied maximise quality of life and continue with treatments which focus on stimulation of the senses to allow whatever slim chance there may be of improvement to occur at some later point. So neurorehabilitation is about transformation and the struggle of very damaged people to in some way recreate themselves after catastrophic injuries. Miracles can and do happen, and the RMC is no stranger to this phenomenon.

Acquired brain injuries (ABI) have long existed in the shadow of clinical ignorance and low public awareness. Compared to heart disease, cancer or even stroke (which is of course ironically a form of brain injury, though it is very rarely so described) ABI is deemed to be of relative low importance. The Department of Health keeps no accurate statistics, and neither do most local health authorities. Even now, after massive advances in neuroscientific research in the last 10-15 years, the emerging national and local health commissioning groups rarely have much to say about ABI and neurorehabilitation.

The implicit assumption behind this silence is that there are few people living with ABI, and their treatment and rehabilitation comprises classic 'low volume, high cost' care. At most, the official line (when policy makers think about the matter at all, which is seldom) is that there are a couple

of hundred thousand people or so living with ABI in the UK. However, when one digs a little deeper, there is evidence that this is a much more numerous condition than the official version allows for. The recent United Kingdom ABI Forum (UKABIF) manifesto 'Life after Brain Injury – A Way Forward' published in July 2012 states that 'between 1.0-1.4 million people attend hospital annually with a head injury, and of these approximately 135,000 are admitted to hospital (every year). A low estimate is that (at least) 1 million people living in the UK have had a head injury, but this does not include the much higher figures for all ABIs.' What this suggests is that when one adds strokes, brain haemorrhages and aneurysms, anoxia/hypoxia, meningitis, encephalitis, brain tumours and so on to the numbers for head injury (traumatic brain injury) there are at least 3 million people in the UK. Certainly, figures kept between 2002 and 2007 in neighbouring East Sussex and Brighton and Hove revealed a steady proportion of two thirds/one third as between non-traumatic and traumatic new cases of ABI. So this is no small problem, even though there is little official recognition yet of this fact.

What can neurorehabilitation contribute? Even though Gustavsson et al estimated in 2011 that the total cost for just TBI (not forgetting the incidence ratio quoted above for numbers of TBIs as against non-traumatic brain injuries) was approximately £4.1 billion a year, there are plenty of studies which demonstrate that good neurorehabilitation input more than offsets these costs. The classic study by Wood et al in 1999 estimated that timely and appropriate rehabilitation would achieve an average lifetime social cost saving of £1.35 million per person – and that is with 14 year old prices! Professor Lynne Turner-Stokes calculated in 2007 that the costs of long-stay neurorehabilitation, however expensive, would be offset by savings from greater independence within a mere 3 years. So neurorehabilitation is cost effective and immensely useful to society.

Who provides neurorehabilitation in the UK? The first thing to say is that because largely of the underestimation and under diagnosis of ABI, there are not enough neurorehabilitation places in the UK. Whether someone who has had a brain injury gets offered a post acute neurorehabilitation placement is something of a lottery, and not usually based on a proper scientific assessment of need. It varies from place to place, and is often down to the quality of neurological clinicians in a locality, and their ability to influence NHS commissioners. There are some post acute NHS rehabilitation units, but they are in the minority and generally

concentrate on the less complex cases. Those needing longer term more specialist rehabilitation, especially in the areas of disorders of consciousness, cognitive needs and behavioural problems, are most likely to receive a service from specialist independent (whether private or voluntary) sector providers. Many of the leading neurorehabilitation providers in the UK are in the independent sector, though the majority of their referrals are funded by the NHS. There is also a significant minority of referrals which come from medico-legal sources – that is, where their rehabilitation is funded by a compensation claim. In the community, the major providers of ongoing rehabilitation and support for ABI people and families are voluntary bodies - Headway for adults, and the Child Brain Injury Trust (CBIT) for children and adolescents. Local authority social services are able to provide some funding, but themselves contribute very little expertise.

There has been little systematic study of how many neurorehabilitation places are actually needed to maximise effectiveness in the UK, though it is safe to say that actual provision lags behind potential need. A population based study of the incidence of traumatic brain injury (TBI) in New Zealand has recently been published in the 'Lancet' (January 2013), which suggests that there are 790 cases per 100,000 of population each year. Bearing in mind the two thirds/one third ratio for non-TBI ABIs to TBI ABIs discussed above, we are likely to have for all ABIs a figure in the region of 2390 per 100,000 of population. Obviously the largest proportion of this figure (approximately 90%) comprises mild ABIs as measured on the Glasgow Coma Scale, but it is a fact that a significant proportion of so-called mild cases have profound and life-changing difficulties post injury, and benefit from neurorehabilitation. Added to these people are the approximately 240 per 100,000 moderate to severe ABIs who absolutely require intensive and longer term neurorehabilitation. Obviously these figures relate to New Zealand not the UK, but since there are no equivalent UK studies, and because New Zealand has many similarities with some of the UK's non-metropolitan shires, they will I think stand as a rough guide.

When we look at the county of Kent, including the Medway unitary authority, we find a population of 1,466,500 (ONS 2011) for Kent and 264,900 (ONS 2012) for Medway, giving an overall total of 1,731,400. If we then look at neurorehabilitation incidence using the proportions outlined for New Zealand above, we arrive at there being in excess of

4,000 moderate to severe ABI cases in the whole of Kent each year, and over 40,000 mild ABI cases.

So in terms of neurorehabilitation need in Kent and Medway, it is safe to say that most of the 4,000+ moderate to severe cases will need at least some input (some of it residential), and something in the region of 25% of the 40,000 mild ABI cases will also have some rehabilitation need, much of which can be provided in the community. How does this translate into actual rehabilitation places currently provided?

At present there are 3 sites within Kent which provide primary neurorehabilitation. 2 of them are within the NHS, and the third is the Raphael Medical Centre, which is private. The East Kent neurorehabilitation unit, based at the Kent and Canterbury Hospital, deals with mostly moderate and some severe cases (Level 2 on the NHS complexity scale) and has 19 beds. The Sevenoaks neurorehabilitation service in West Kent deals with the moderate to mild spectrum (Level 3) and has 8 beds plus a range of outpatient services. The Raphael Medical Centre, also in West Kent, currently has 50 beds, almost entirely for patients with more complex needs ((Levels 1 and 2). The envisaged new development on the RMC site will be for the most complex (Level 1) needs, and 36 new beds are planned.

In addition there are several smaller services in Kent which provide slow stream rehabilitation and step-down support. Hothfield Manor near Ashford is perhaps the most significant of these.

So what is revealed is that in Kent current neurorehabilitation provision by no means matches potential demand. This is even allowing for the fact that some of these beds can be used more than once in a year, although actually most neurorehabilitation is quite a lengthy process (minimum stay 4-6 weeks, maximum stay over 2 years). No studies have been made to develop a ratio of necessary rehabilitation beds per 100,000 of population so far as I'm aware, but I have heard it stated that Kent ideally needs somewhere between 80 and 110 Level 1 and Level 2A beds. It currently has no more than 50, and perhaps rather less (not every current bed at the RMC is for the most serious and complex cases), and even with the projected 36 extra RMC beds scarcely reaches the preferred amount.

2 further factors need to be taken into account when considering the merits of the RMC's plans.

One is that the RMC itself has built over almost 30 years a strong and nationwide reputation for being able to work with very complex and demanding ABI cases. These are in the domains of disorders of consciousness and also challenging behaviour. Leading British clinicians such as the eminent neuropsychologist Professor Barbara Wilson work here, as do a range of European, Brazilian and Asian clinicians. The RMC is a centre for innovation, research and the international exchange of ideas. It has held several symposiums over the last few years. It is thus something of a magnet far beyond the borders of Kent.

The second factor is linked to this. When one considers the RMC's catchment area for referrals, it extends much further than Kent alone. As a quasi-national neurorehabilitation resource, many patients are referred to the RMC from the London boroughs and from right across southern Britain. Therefore it is not enough to look at the appropriateness of the RMC's plans to extend and develop purely in the context of the needs of Kent ABI people alone. The RMC has major national importance in the neurorehabilitation sphere.

For all of the above reasons I would argue that the plans for 36 new rehabilitation beds at the RMC need to be agreed as soon as possible, because they will very literally have a positive impact on the lives of people who have had an ABI all over the UK. I wish the RMC staff the best of luck in their endeavour.

Mike Hope (MA and CQSW Kent, BA Lancaster)

National committee member of UKABIF, UKABIF Regional Groups Coordinator, Trustee of West Suffolk Headway, Case Management Coordinator Optua UK, Client Support Coordinator Thompsons Solicitors, Relationships Coordinator Recolo.

14.03.13

NEED ASSESSMENT IN SUPPORT OF PLANNING APPLICATION FOR A NEW FACILITY

PREPARED BY THE RAPHAEL MEDICAL CENTRE

AUGUST 2012

The Raphael Medical Centre was founded in 1983 by Liz and Gerhard Florschutz.

Personal experience within their family led them to the decision to provide a clinical/medical facility based on a more holistic approach to medicine. The aim was and is to develop a truly integrative patient centred service. Working in close collaboration with the National Health Service we are able to integrate our work and develop care pathways that truly benefit our patients.

The ability to pay should not be the determining factor for admission.

In the early days a wide spectrum of patients were admitted ranging from Acquired Brain Injury, orthopaedic rehabilitation, acute and chronic back pain, cancer (both for active therapy and palliative care) and elderly patient rehabilitation. In those days patients were funded through a variety of ways:- through ECRs (Extra Contractual Referrals), private funding, medical insurers and the help of our bursary fund. Admission depended upon the medical expertise available at any one time, not on financial criteria.

Medical support in the early days was provided mainly by Dr Douch.. Dr Twentyman, F.F.Hom., Senior Consultant at the Royal Homoeopathic Hospital was for many years our Hon. Consultant. Dr Kauffmann and Dr Goldman provided medical support for acute rehabilitation.

In 1990 the Raphael Medical Centre extended its facilities by building a new physiotherapy gymnasium and hydrotherapy pool and additional bedrooms. Dr Kauffmann, then Consultant in Rehabilitation and Rheumatology at Orpington and Queen Mary's Hospital, Sidcup, was advising on these facilities.

Over the years an increasing number of patients with Acquired Brain Injury (ABI) have been treated, ranging from acute early phase rehabilitation (those coming directly from I.T.U. or District General Hospital) to those who have become "stuck" in their recovery due to cognitive and/or behavioural limitations. We experienced that these patients greatly benefited from our medical treatment approach.

The Raphael Medical Centre is a 50 bedded hospital for patients requiring rehabilitation after sustaining a brain injury. It comprises an eight bedded facility for patients with minimal conscious state (MLS) and vegetative state, and thirty-four beds in the main hospital for patients with a varied medical and brain injury aetiology. There is also an eight bedded unit for patients with psychiatric needs combined with acquired Brain Injury. This speciality unit is under a separate Mental Health Hospital Registration.

The Hospital is located in the beautiful Kent Countryside in an impressive renovated Victorian Mansion sitting amidst seventeen acres of private estate. Each patient has a private room with en-suite facilities. We operate a key worker system so that patients build trusting therapeutic

relationships essential for the recovery process. In addition to private rooms, we have a lovely communal lounge, dining room and a host of therapy rooms.

Our philosophy is based on the holistic approach to treatment and care. The aim is to enable patients to reach their full potential by means of realistic goal planning with interventions individually designed to meet need. Therapists work together with patients and their families to achieve these goals. Our service is quality assured in line with Governments elaborate health agenda including robust Clinical Governance Standards. We are regulated by the Care Quality Commission (CQC) who sets required outcome standards. Inspections are conducted at regular yearly intervals to ensure standards are being achieved.

Over the years we have continuously developed our facilities, concentrating on our core activities – complex neurological conditions and acute neurological-rehabilitation of patients with acquired brain injury (both traumatic and non-traumatic)

As a Centre we are one of the very few that have achieved Investors In People (IIP), ISO 9001 and ISO 19001 quality measures. Through a process of continuous training of our personnel and good outcome results we have become recognised as a centre of excellence. Most of our patients are thus funded by the NHS because of the quality of service we provide.

We recognise that acute rehabilitation results in various phases and have developed an integrated care pathway leading from acute (early phase post neuro surgery or ITU) rehabilitation to community re-integration. This is achieved by providing the acute phase at our centre in Hildenborough and the 'slow stream' rehabilitation in our Brighton unit, enabling patients easier access to communal facilities. Furthermore, we can support people in their own homes through team of trained and dedicated rehab assistants enabling early discharge to "normal life".

The enclosed flow chart shows the care pathway (Appendix 1)

WHY DO WE THEN NEED TO PROVIDE ADDITIONAL FACILITIES?

Many of our patients some 20-30 years ago would not have survived their trauma. However, with improved and extensively developed emergency services, many patients now survive, creating a greater demand that is not currently being met, with patients remaining in acute hospitals for longer than needed. This brings its own complications (contractures of joints, hospital acquired infections etc) and in the case of Kent and Medway, being treated out of area with all the social difficulties this often entails in terms of visiting and supporting loved ones.

The enclosed data clearly indicates the urgent lack of, and therefore need for more beds, and for improved investigative facilities (see **Appendix 2**). At present, if our patients require further investigation, i.e. CT of MRI scans, EEG or laboratory investigation (Haematology, Biochemistry etc) it can lead to delays due to waiting list and thus later than necessary response to treatment. We therefore urgently require these facilities on site and the new unit will enable us to provide these to meet the needs of our patients.

Over the years we have built a team of health care professionals that are leading experts in their field of neurological-rehabilitation and neuropsychology i.e. Prof Barbara Wilson. To give you an example, in the local District General Hospital there are only one or at most two trained trachea nurses, both were recently on holiday leaving the hospital compromised. In our facility due to the intensive nature of our work we have eight trained trachea nurses. This expertise takes time to develop. To duplicate our facilities and expertise is virtually impossible and would not benefit the vulnerable people we are caring for.

The centre in Hildenborough is also well positioned and easily accessible from all parts of Kent and Medway and within easy reach of the (Neuroscience centre for Kent and Medway), namely Kings College hospital.

Above all, the amenity and ambiance of the site, some 17 acres of landscaped grounds with a waterfall and lake, make it an ideal setting for the acute nature of our work. The peace and quiet is so important for this early time of recovery.

I enclose a detailed analysis (as far as it is possible with scarce data) of demographic data including:- incidence rate of traumatic and non-traumatic brain injuries, breakdown of beds currently available in Kent and Medway .

Also enclosed is a detailed description of Specialised Rehabilitation Service for brain injuries and complex disabilities (definition no 7). This is endorsed by the British Society for Rehabilitation Medicine (Royal College of physicians) - the envisaged framework for the development and configuration of rehabilitation services. It is based on the complexity of needs (category of patient's needs for Rehabilitation A – D) and the required levels of service provision to meet these needs (level 1 – 3)

To summarise:

Category A needs - Level 1 service provision (divided into 1a and 1 b)

Category B needs - Level 2 service provision (divided into 2a and 2 b)

Category C needs - Level 3 a service provision

Category D needs - Level 3 b service provision

From the above it is clear that Kent and Medway are seriously underprovided, without the required service provisions to meet the needs of the population.

At the present time the Raphael Medical Centre is the only service provider able to treat and care for Category A patients and has the facilities to meet Level 1 and Level 2 Criteria. Also enclosed is a computation of the required number of service provisions and the serious shortfall that already exists. From the enclosed data it is quite clear there is an urgent need to increase the number of beds available to meet the needs of the area.

It is therefore paramount that this planning application receives permission in a timely manner and that these services will be available by the end of 2013 beginning 2014.

There will of course also be economic benefit in terms of long term employment and additional benefits during the construction period to the local community.

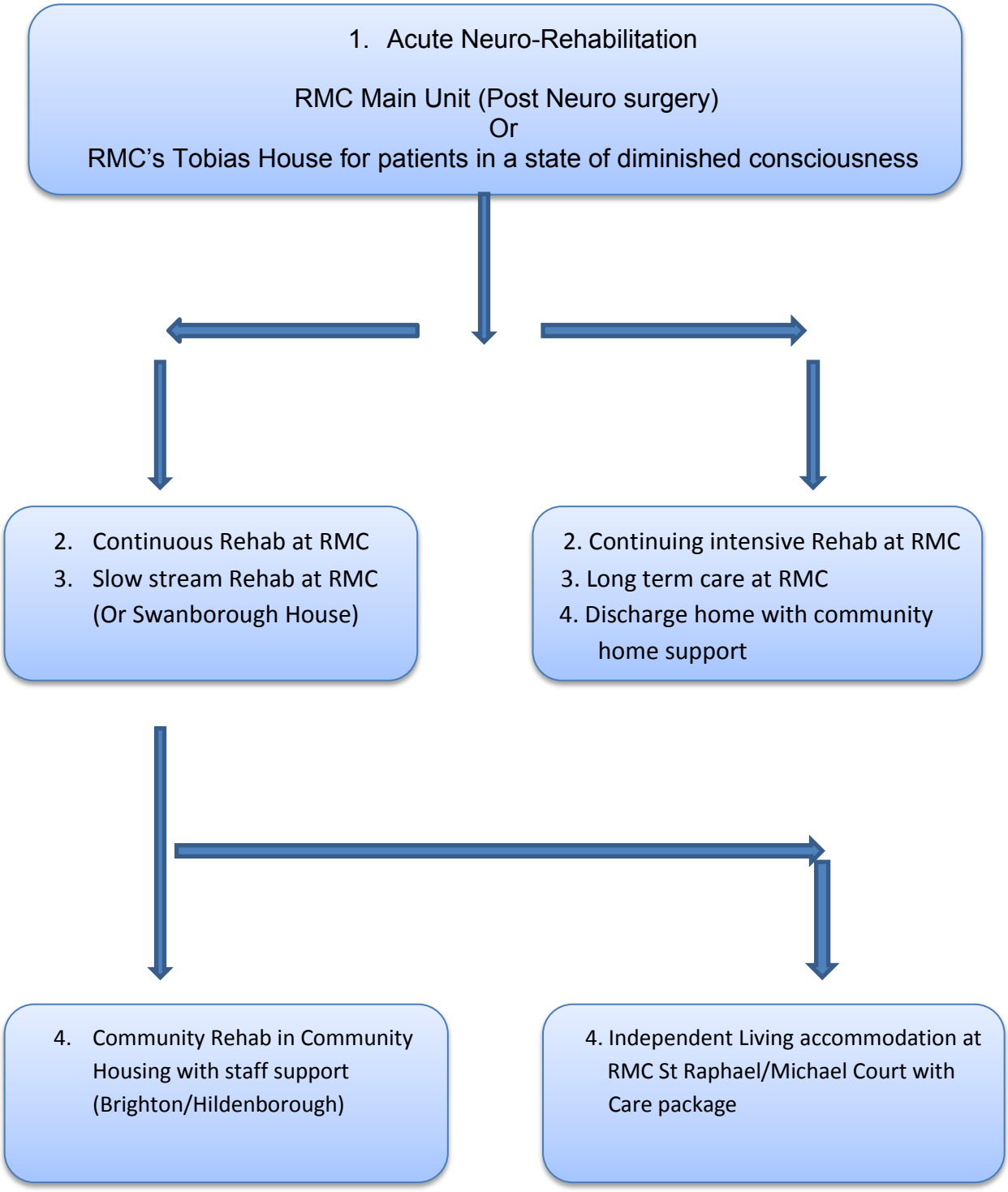
I also enclose letter from the only two Consultants in Rehabilitation Medicine in Kent and Medway and also from Kent's only Neuro-Psychiatrist supporting the urgent need for more beds and the reason why they should be provided at the Raphael Medical Centre.

The very fact that only two consultants cover a population of 1.7 million, well below the recommended minimum, indicates the Lack of facilities. The additional beds and supporting facilities will help to attract more consultants to the area for the benefit of the population. It will help to develop research and new treatment strategies.

Appendix 1

Patient Care Pathway

Raphael Medical Centre Patient Care Pathway



Appendix 2

DEMOGRAPHIC ASSESSMENT

The Raphael Medical Centre

Demographic Data

Population of Kent & Medway

Kent	1,464,000	(Estimated to grow to 1584 by 2026)
Medway	260,000	(Estimated to grow to 271 by 2026)
	1,724,000	

Traumatic Brain Injuries

Incident Rate of 229 per 100K population (1)

		Per Annum
Total		3948
Resulting in Hospitalisation (Excluding Children)		975
Deaths		204
Treatment Cases		**975**
Of Which	Skull Fractures)	
	Cerebral Laceration)	88
	Intracranial Haemorrhage)	

Cause of Traumatic Brain Injuries (2)

RTA	20%	(Mostly Young People)
Falls	28-35%	(Mostly Older People)
Assaults	11%	
Being Struck By/Against	16-18%	
Others	15-25%	

Non Traumatic Brain Injuries (3) (New Cases Every Year)

Brain Tumor	20	Per 100K Population	345
Encephalities	7.4		127
Epilepsy	80		138
Guillain Barre	2.5		43
Intracranial Haemorrhage	2.5		43
MND	2.0		34
MS	4		69
PD	17		293
Subdural Haemorrhage	10		172
First Stroke (Survivors after 56 Days)	92		1544 (4)
Hipoxic & Drug Related ABI Resulting in Hospitalisation & needing Neuro Rehab (excluding strokes)			**385**
Total (Traumatic (975) & Non Traumatic (385)			**1360 (5)**

Source: Tennant et al 2005.

And these numbers are increasing

It must also be noted that despite the improved stroke services in Kent and Medway only about 70% of Hospital admissions due to stroke spent 90% of their time in a dedicated acute stroke unit. This is largely due to shortage of suitable facilities.

Based on the above we estimate the following number of beds are required:-

Level 1	)	
	)	112
Level 2	)	
Level 3		148
Total		**260**

This does not take into account existing Neurological conditions

(1) Tennant Etal 200+
(2) Monti Etal
(3) Neurological Alliance
(4) National Stroke Survey for 2008
(5) Not included cases of Hipoxic Brain Damage and Brain Injury as result of substance abuse.

Current Availability of Neuro Rehab beds in Kent and Medway (Does not include areas under Bromley PCT ((Orpington etc.)

	Number of Beds	Service Provision Level	Need Category
Raphael Medical Centre	50	1,2,3	A+B+C
Tobias House	8 (1)		
Main House	7 (1)		
Main House	18 (2)		
Main House	9 (3)		
SCU	8 (1+2)		
Strode Park Re-Ability Wing Herne Bay	15	D/3b	D
Hothfield Manor	20	3	C+D
East Kent Neuro Rehab Unit Canterbury	19	2	B
-Post Acute & Long Term Progressive Conditions			
-Single Incident Brain Injury	10 (2)		
West Kent Neuro Rehab Unit Sevenoaks	8	2	C
West Kent Neuro Psychiatry	2	2	C
Frank Cooksey Unit (Kings)	15	1,2	A+B
(Various Stroke Units in D&H)			
Sapphire Ward	16	3b	D
Total Provision	**145**		
Estimated (Minimum) Under-Supply	**115**		

Note: Only the Raphael Medical Centre is currently able to provide for all service provision levels.